

(3) After removal from the oven immediately place each signal in a chamber:

(i) At a temperature of at least 20 degrees C (68 degrees F) but not more than 25 degrees C (77 degrees F);

(ii) At not less than 65% relative humidity;

(iii) For ten days;

(4) Then remove each signal from any sealed packaging and fire it.

(5) The test sample fails the test if:

(i) Any signal ignites or decomposes before firing;

(ii) Any signal when fired malfunctions in a manner that would cause burns or injury to an unprotected person firing the signal, or;

(iii) Two or more of the signals fail to project and ignite the pyrotechnic candle.

(c) The Spontaneous Combustion Test must be performed in the following manner:

(1) Select three signals from the remaining six signals and place them in a thermostatically controlled even temperature over for 48 hours at a temperature of 75 degrees C (167 degrees F).

(2) The test sample fails the test if any signal ignites or decomposes during the test.

(d) The Luminous Intensity and Chromaticity Test must be performed in the following manner:

(1) Remove the pyrotechnic candle from the remaining three signals.

(2) Ignite, measure, and record the intensity of the burning candle with a visual photometer or equivalent photometric device or automatic recorder:

(i) While the specimen is supported in a horizontal position and the photometer is at right angles to the axis of the specimen,

(ii) At a distance of at least 3 m (10 ft.).

(3) Calculate the intensity of the candle as in § 160.066-7(c).

(4) Measure and record the chromaticity of the burning candle as specified in § 160.021-4(d)(4).

(5) The test sample fails the test if more than one signal has a luminous intensity of less than 10,000 candela, or more than one signal is not "vivid red".

§ 160.066-15 Production testing.

(a) Production tests must be performed under the procedures in Subpart 159.007 of this chapter.

(b) The operational tests in § 160.066-12 must be performed for every lot of signals produced.

(c) The technical tests in § 160.066-13 must be performed at least once every twelve months, or at least once every 10 lots, whichever occurs first.

(d) If a lot is rejected on the basis of the technical tests, then each subsequent lot produced must be tested according to the technical tests until samples from a lot pass these tests.

(e) An independent laboratory acceptable to the Commandant must perform or directly supervise:

(1) Each technical test, and

(2) All operational tests for at least four lots in a 12 month period, unless fewer than four lots are produced in a 12 month period. If less than four lots are produced in a 12 month period, each operational test must be performed or directly supervised by the independent laboratory.

(f) If a lot selected by the independent laboratory for an operational test is rejected, then the operational tests for the next lot produced, and the rejected lot, if reworked, must be performed or directly supervised by the independent laboratory. The tests required by this paragraph must not be counted for the purpose of meeting the requirements of paragraph (e).

(g) The independent laboratory selects the lots upon which technical tests are performed.

(h) If the manufacturer produces more than four lots within a 12 month period, the independent laboratory selects the lots for which it performs or directly supervises the operational tests.

(i) The operational test performed or directly supervised by the independent laboratory must occur at least once during each quarterly period, unless no lots are produced during that period.

(j) The independent laboratory, when it performs or directly supervises the technical tests required by paragraph (c) or (d) of this section, must inspect the signals selected for testing and compare them with the approved plans.

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Each signal inspected must conform to the plans.

Subpart 160.071 [Reserved]

Subpart 160.072—Distress Signals for Boats, Orange Flag

SOURCE: CGD 76-183a, 44 FR 73054, Dec. 17, 1979, unless otherwise noted.

§ 160.072-1 Applicability.

- (a) This subpart establishes standards for distress flags for boats.
- (b) [Reserved]

§ 160.072-3 General performance requirements.

- (a) Each flag must:
 - (1) Be a square or rectangle at least 90 cm (36 inches) wide and at least 90 cm (36 inches) long. If the flag is a rectangle, the shorter side cannot be less than $\frac{2}{3}$ the length of the longer side;
 - (2) Have no less than 70% of the total area colored a bright red-orange color;
 - (3) Display a black disc and a black square on the red-orange background on both sides arranged as follows:
 - (i) The diameter of the disc and the length of one side of the square shall be equal, and shall each be $\frac{1}{3}$ of the length of the longest side of the flag, or 30 cm (12 inches), whichever is greater.
 - (ii) The disc and square must be centered on one axis of the flag parallel to the longest side of the flag as shown in Figure 160.072-3. If the flag is a square, the axis may be parallel to any side.

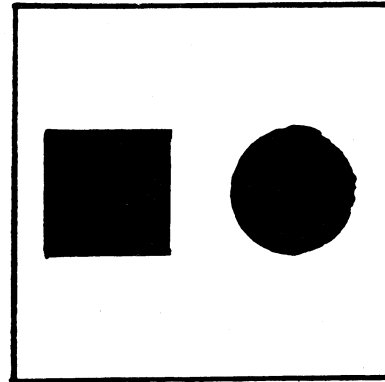


FIGURE 160.072-3

- (iii) The disc and square shall be separated by a distance of $\frac{1}{3}$ the length of the longest side of the flag or 15 cm (6 inches), whichever is greater.
- (4) Be capable of passing the accelerated weathering test of § 160.072-5;
- (5) Have reinforced corners, each with a grommet; and,
- (6) Be packaged with 4 pieces of line, with a tensile strength of at least 225 N (Newtons) (50 lbs) no less than 30 cm (12 inches) long, capable of passing through the grommets freely.
- (b) [Reserved]

§ 160.072-5 Accelerated weathering test.

- (a) Condition the flag, folded to $\frac{1}{16}$ th its size or as packaged, whichever is smaller, by submersion in 5% by weight sodium chloride solution for 2 hours followed immediately by storage at 95% (± 5) relative humidity and 40 °C (± 3) (100 °F ± 5) for at least 15 days.
- (b) Unfold and suspend flag by the lines provided, secured through each grommet.
- (c) Subject the flag to alternate 3 minute cycles of 5% by weight sodium chloride solution at 55 degrees (± 5) °C and air blasts of 40 knots at 55 degrees (± 5) °C, perpendicular to and over the entire surface of one side of the flag, without interruption for a period of not less than 24 hours.
- (d) The flag fails the accelerated weathering test if
 - (1) After conditioning, the flag cannot be unfolded without damage,